
OAR Box 1824

Prepped by Charmelle Mathews

Document Number:
109) IV-D-93

Docket Number:
A-90-16

Petroleum Products Division

A-90-16
IV-D-93
(Esso)

Imperial Oil
55 St. Clair Avenue West
Toronto, Ontario
Canada M5W 2J8

Donald F. MacLauchlan
Vice-President

Supply & Direct Sales Department

Richard C. Betts
General Manager
Supply Operations Division

July 18, 1990

VIA COURIER

AUG 10

Mary T. Smith, Director
Field Operations and Support Division (EN-397F)
U.S. Environmental Protection Agency
401 M Street SW
Washington, D.C.
USA 20460

Dear Mary:

The purpose of this letter is to provide you with some information on our experience with the gasoline additive MMT in Canada. Esso Petroleum Canada is the largest manufacturer and retailer of gasoline in Canada. With minor exception, we have used MMT in unleaded gasoline continuously for over 10 years with a maximum allowable level of 18 mg/L, about twice the limit recently applied for by Ethyl.

Esso Petroleum Canada has no direct financial or business incentive to either support or oppose the current Ethyl waiver application. However, we recognize that the EPA ruling may impact on future use of MMT in Canada. It is therefore important to us that this issue be decided as objectively as possible.

We have reviewed all of the published information on the subject, and are "knowledgeable users". We have followed the technical and political arguments surrounding MMT closely, and have worked with several industry and government groups that have studied and reviewed MMT use in unleaded gasoline. These include a 1986 review by the Canadian General Standards Board and an independent scientific review by the Royal Society of Canada Commission on Lead in the Environment.

The Royal Society concluded that MMT was a viable octane alternative, along with MTBE/ethers and ethanol/alcohols. The CGSB study concluded that MMT use should continue to be allowed and recognized in the CGSB National Standard for gasoline but that its use should remain open to challenge with whatever new information that becomes available. This has proven to be a workable approach in Canada that we expect to continue for the foreseeable future.

MMT is added to gasoline in Canada in the final blending process, and although its use is not absolutely necessary in order to achieve desired octane levels, the use of MMT reduces overall crude oil consumption and reduces the severity of processing in the manufacture of gasoline. Without the use of MMT costs, ultimately born by the consumer, would rise and other potentially adverse environmental impacts would occur.

Esso Petroleum Canada's experience with MMT use has been very positive and is certainly much different than one would expect from a casual reading of US articles on the subject. We know from over a hundred billion litres and a trillion miles of experience that MMT does not foul spark plugs, poison oxygen sensors, plug catalysts or wear out engines. MMT does impart a "rust red" colour to plugs, combustion chamber and catalyst bed, all of which is normal for its use. These observables appear to be totally innocuous.

We have never seen a catalyst or oxygen sensor that has failed because of manganese oxide plugging alone. If plugging occurs, it is more likely from gross catalyst overheating caused by an out of tune or mis-calibrated engine. Temperatures can on occasion get so high as to physically melt the catalyst core, and at the same time melt manganese oxide deposits onto the front face of the catalyst. It is easy to erroneously blame MMT when it is not the root cause of the problem.

In summary, Esso Petroleum Canada, in over 10 years of experience, has found MMT to be a valuable and cost effective octane enhancer for unleaded gasoline. It is suitable for use in all makes, models and styles of catalytic emission control systems. We believe that our customers have been well served by its use.

Yours truly,

R. C. Betts

R.C. Betts

cc: D.F. MacLauchlan
D.C. Wilson - Ethyl Canada